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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,334	08/22/2003	Gary R. Holt	10006.001410	8286
31894 7590 05/25/2007 OKAMOTO & BENEDICTO, LLP P.O. BOX 641330 SAN JOSE, CA 95164			EXAMINER YENKE, BRIAN P	
			ART UNIT 2622	PAPER NUMBER
			MAIL DATE 05/25/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/646,334

Applicant(s)

HOLT ET AL.

Examiner

BRIAN P. YENKE

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE/Amendment (26 Apr 07).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 4-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) all the above is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 26 Apr 07 has been entered.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

In the event the applicant disagrees with the new grounds of rejection below, the examiner would like the applicant to clarify given that progressive to interlace conversion is known, motion object estimation within conversion of signals is known and why one of ordinary skill in the art would not recognize that such conversion would require extracting the first/second field from the first/intermediate frame as claimed, in order to expedite prosecution.

As requested previously, the examiner included the MPEG-4 protocol, which is an object based segmentation motion detection algorithm. The examiner requests the applicant to clarify the differences between MPEG-4 and the current application, in order to expedite prosecution.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeHann et al, US 6,937,655 in view of Dorricott et al., US 5,329,309.

In considering claims 2-5 and 10-12,

DeHann discloses a system, which performs segmentation and object motion estimation between fields/frames of an incoming video sequence wherein the sequence is interlaced and the output is interlaced. DeHann discloses that an intermediate frame/interpolated frame is generated based upon the subsampling of the incoming fields/frames (Figs 1-3 and description).

However, DeHann does not explicitly recite receiving a progressive signal. The reception of a progressive signal, which is later, converted into interlaced, or no conversion based of course on the display/user requirements is conventional practice in the art. The examiner evidences such practice by incorporating Dorricott which discloses the concept of receiving anyone of a multitude of video signals (including interlaced and progressive) wherein the system may convert the signals into any one of a desired outputs (including interlaced and progressive as shown (Figs 66-70)).

Therefore it would have been obvious to one of ordinary skill in the art to modify DeHann which discloses the object estimation/segmentation of incoming interlaced signal, to also estimation/segment progressive sources if received, in order to provide the user the conventional capability of receiving a variety of inputs and providing the user the ability to convert the signal as desired.

However, neither DeHann nor Dorricott explicitly recite how the interlaced signal is produced. (i.e. the claimed extracting the first/second alternating field and wherein they comprise the odd and even fields of the interlaced video sequence) It is noted that DeHann concerns motion object segmentation/estimation with an interlaced signal to produce an interlace signal, and Dorricott has been evidenced as receiving a progressive signal (i.e. 30 frames per second) and convert such signal into an interlaced signal (i.e. at 60 fields per second).

The examiner incorporates Horikawa, US 6,067,120 (Figs 4a/b) which discloses that a single progressive frame creates an intermediate frame (i.e. average frame) which is used to create a signal at twice the frequency (i.e. interlaced).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize in DeHann/Dorricott which disclose a system which converts a progressive signal to interlace using motion object estimation/detection, by using the intermediate frame as the second field since the conversion requires 2 fields for every frame.

In considering claims 6-9,

DeHann discloses segmenting the incoming images based upon the objects included in the fields/frames, wherein the areas that are exposed or filled in are based upon the presence of the objects in one or more of the frames/fields.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (571)272-7359. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, David L. Ometz, can be reached at (571)272-7593.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571)-273-8300

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-HELP.

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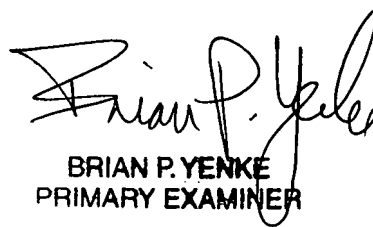
For other technical patent information needs, the Patent Assistance Center can be reached through customer service representatives at the above numbers, Monday through Friday (except federal holidays) from 8:30 a.m. to 5:00 p.m. EST/EDT.

The Patent Electronic Business Center (EBC) allows USPTO customers to retrieve data, check the status of pending actions, and submit information and applications. The tools currently available in the Patent EBC are Patent Application Information Retrieval (PAIR) and the Electronic Filing System (EFS). PAIR (<http://pair.uspto.gov>) provides customers direct secure access to their own patent application status information, as well as to general patent information publicly available. EFS allows customers to electronically file patent application documents securely via the Internet. EFS is a system for submitting new utility patent applications and pre-grant publication submissions in electronic publication-ready form. EFS includes software to help customers prepare submissions in extensible Markup Language (XML) format and to assemble the various parts of the application as an electronic submission package. EFS also allows the submission of Computer Readable Format (CRF) sequence listings for pending biotechnology patent applications, which were filed in paper form.

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A stylized handwritten signature in black ink, appearing to be 'B.P.Y.' with a long, sweeping underline.

B.P.Y.
23 May 2007

A handwritten signature in black ink that reads 'Brian P. Yenke' in a cursive script.

BRIAN P. YENKE
PRIMARY EXAMINER